Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication	ISSN number	UGC Approved/UGC Care List Journal
2020-2021						
01. An eco-friendly approach for the Synthesis of Schiff base under solvent free condition	Rakesh P. Chaudhari, Bharti P. Koli, Ganesh R. Chaudhari	Chemistry	Journal of Reseach and Development	Jan-20	2230-9578	**UGC Approved List No.64768**
02. Tartaric Acid Catalysed Synthesis of Schiff base Under Grinding Condition	Rakesh P. Chaudhari, Bharti P. Koli, Ganesh R. Chaudhari	Chemistry	RESEARCH JOURNEY Multidisciplinary International E-research Journal	Feb-20	2348-7143	**UGC Approved List No.40705 & 44117**
03. Purvakhandesh Jilhyat Mahatma Gandhi Jayanti Usttav (1929-1942)	Dr.Dinesh R. Mahajan	History	ESEARCH JOURNEY Multidisciplinary International E-research Journal	Feb-20	2348-7143	**UGC Approved List No.40705 & 44117**
04. E-waste- Environmental Problem	Hemalata Kolhe	Computer Science	ESEARCH JOURNEY Multidisciplinary International E-research Journal	Feb-20	2348-7143	**UGC Approved List No.40705 & 44117**
05. Assement of Effect of Triazophos Toxicity in the Protease Activity in Fresh water by Bivalve, Lamellidens marginalis	M.S. Waghlade, A.G. Patil	Zoology	Purakala	Apr-20	0971-2143	**UGC Care Journal**
06. Yawal Talukyatil Adivashi va Shetkaryancha Engrajanshi Sangharsh (1820-1852)	Dr. Dinesh Ramdas Mahajan	History	Drishtikon	Jun-20	0975-119X	**UGC Care Journal**
07. Study of Grwoth and Characterization of Cobalt Tartrate Crystals in Silica Gel Medium	P. A. Savale, V. B. Suryawanshi	Physics	Journal of Research and Development A Multidisciplinary International Level Referred Journal	Aug-20	2230-9578	**UGC Approved List No.64768**

An eco-friendly approach for the synthesis of Schiff base under solvent free condition

Rakesh P.Chaudhari , Bharti P.Koli, Ganesh R.Chaudhari
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Abstract:

Schiff base was synthesized by condensation of Aniline with substituted aromatic aldehyde catalyzed by Tartaric acid under solvent free condition. Advantages of reaction are mild reaction condition, work up to afford the high yield of product. The product is characterized by IR spectra.

Keywords: Schiff base, Tartaric acid, IR Spectra etc.

Introduction:

When any primary amine condensed with an aldehyde or a ketone under specific conditions form a Schiff's Base is named after Hugo Schiff [1]. A Schiff base is also known as imine or azomethine.It is a nitrogen analogue of an aldehyde or ketone in which the carbonyl group has been replaced by an imine or azomethine group. Schiff bases are widely used organic compounds. They are used as catalysts, pigments and dyes, intermediates in organic synthesis, and as polymer stabilizers [2].Schiff bases have also exhibit a broad range of biological activities, including antibacterial, antifungal, anti-inflammatory, antimalarial, antiviral, antiproliferative, and antipyretic properties [3].

The preparation of imines was first reported in the 19th century by Schiff (1864). Since then a variety of methods for the synthesis of Schiff base have described using Bro¨nsted-Lowry or lewis acids used for the synthesis of Schiff bases include $ZnCl_2$, TiCl4, $MgSO_4$-PPTS, $Ti(OR)_4$, alumina, H_2SO_4, $NaHCO_3$, $MgSO_4$, $Mg(ClO_4)_2$, H_3CCOOH, $Er(OTf)_3$, P_2O_5/Al_2O_3, HCl [4-16].lemon juice[17],water[18] etc. solvent free chemical reactions have several advantages in preparative, simplifying work-up, formation of cleaner products, enhanced selectivity, reduction of by products, reduction in the waste produced, and much improved reaction rates. This technique involves as an alternative reaction media to replace hazardous and expensive solvents routinely used in organic synthesis [19].

Here we have describe solvent free synthesis of Schiff base by two component synthesis by condensing substituted aromatic aldehyde with Aniline by using easily available, non-toxic tartaric acid as catalyst.

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Tartaric Acid Catalysed Synthesis of Schiff Base Under Grinding Condition

Rakesh P. Chaudhari, Bharti P. Koli, Ganesh R. Chaudhari
Arts and Science College Bhalod, Tal-Yawal, Dist-Jalgaon

Abstract:

4-methoxy aniline was condensed with various substituted aromatic aldehyde in presence of Tartaric acid as catalyst under grinding condition.This method is simple economical,clean with easy work up.The structure of product was determined by IR Spectroscopy.

Keywords: Grinding condition, Schiff base,IR etc

Introduction:

When any primary amine reacts with an aldehyde or a ketone under specific conditions a Schiff's Base is form named after Hugo Schiff [1]. Structurally a Schiff base (also known as imine or azomethine) is a nitrogen analogue of an aldehyde or ketone in which the carbonyl group has been replaced by an imine or azomethine group. Schiff bases are some of the most widely used organic compounds. They are used as pigments and dyes, catalysts, intermediates in organic synthesis, and as polymer stabilizers [2]. Schiff bases have also been shown to exhibit a broad range of biological activities, including antifungal, antibacterial, antimalarial, antiproliferative, anti-inflammatory, antiviral, and antipyretic properties [3].

The first preparation of imines was reported in the 19th century by Schiff (1864). Since then a variety of methods for the synthesis of Schiff base have been described. Examples of Bronsted-Lowry or lewis acids used for the synthesis of Schiff bases include $ZnCl_2$, $TiCl_4$, $MgSO_4$-PPTS, $Ti(OR)_4$, alumina, H_2SO_4, $NaHCO_3$, $MgSO_4$, $Mg(ClO_4)_2$, H_3CCOOH, $Er(OTf)_3$, P_2O_5/Al_2O_3, HCl[4-16].lemon juice[17],water[18] etc.

In recent years, use of several green catalyst for the synthesis of organic compound have received increasing attention, because of (i) short reaction times, (ii) increased safety, (iii) economic advantages.

Experimental:

All the chemicals were purchased from Aldrich/Merck and used without furtherpurification. Melting points were determined in open capillaries using ThermocalAnalabapparatus and are uncorrected. The progress of the reactions as well as purity ofCompounds was monitored by thin layer chromatography with F254 silica-gel percolatedsheets using hexane, ethyl acetate (8:2) as eluent; UV light vapour were used for detection. IRspectra were recorded on Agilent Cary 630FTIRInstrument, and values are expressed in cm^{-1}.

General Procedure:

In a mortar pestle added a mixture of Substituted benzaldehyde (0.01 mole) and 4-methoxy aniline (0.01mole) and tartaric acid (20mol %) were grinding for appropriate time at room temperature. The progress of the reaction was monitored by TLC. After the completion of the resulting solid was filtered and recrystallized from ethanol. All these synthesized compounds were characterized by their melting point and I.R. spectral study.

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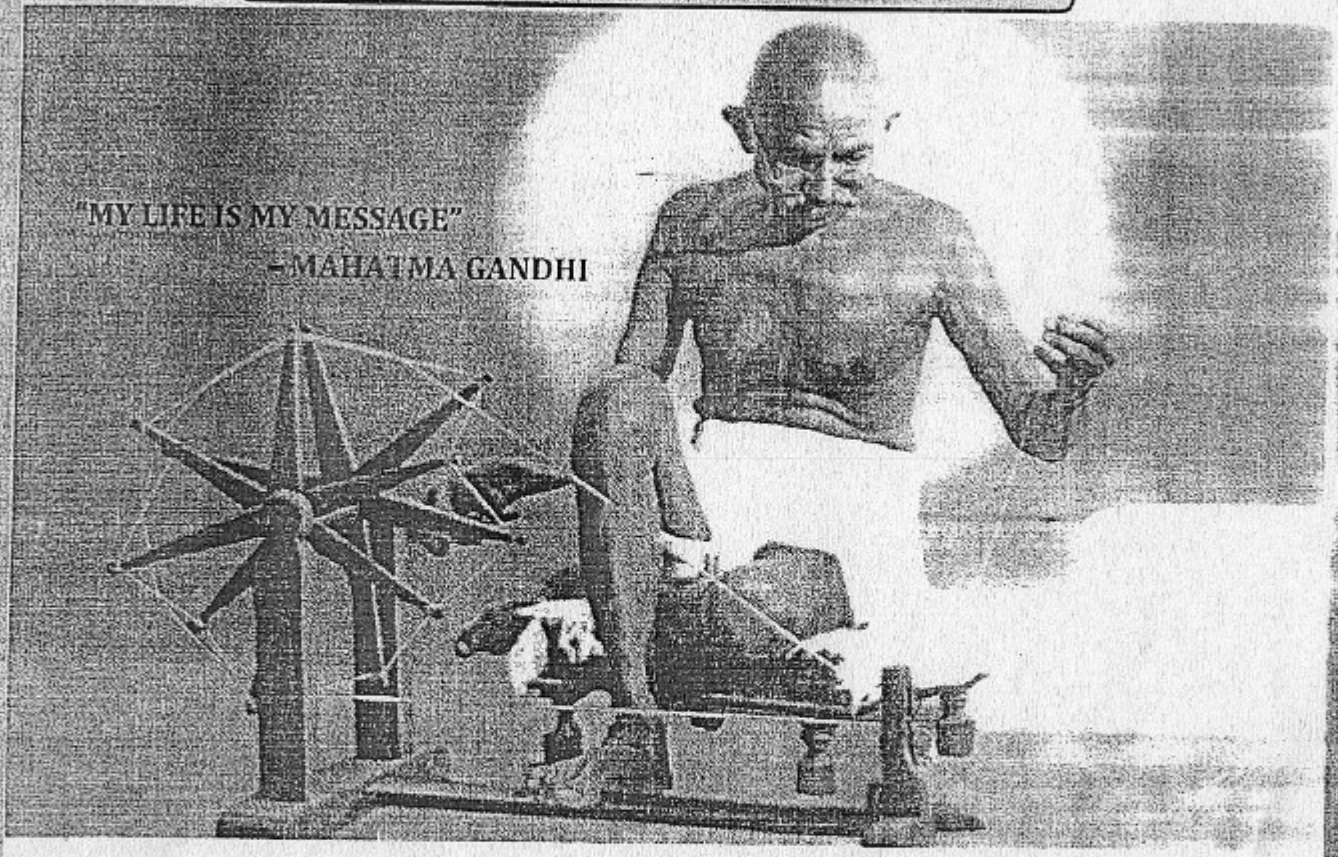

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पूर्वखानदेश जिल्हयात महात्मा गांधी जयंती उत्सव (१९२९-१९४२)

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१९२० पासुन महात्मा गांधींकडे भारताच्या स्वातंत्र्य चळवळीचे नेतृत्व आले. आणि त्यांच्या नेतृत्वाखाली विविध चळवळींच्या माध्यमातुन देश संघटित होऊन स्वातंत्र्य चळवळ अगदी गावागावात पोहोचली. त्यातुन महात्मा गांधी देशातील जनसामान्यांच्या मनामनात पोहोचले. त्यामुळे जवळपास १९२९ पासुनच देशभरात महात्मा गांधी जयंती साजरी करण्यात येऊ लागली. त्यानुसार पुर्वखानदेश जिल्हयातही गावागावात गांधी जयंती उत्साहात साजरी करण्यात येऊ लागली. त्यानिमित्ताने प्रबोधनात्मक कार्यक्रम, सुत कताई, अस्पृश्यता निवारण यासारख्या राष्ट्रउभारणीस अनुकूल कार्यक्रमांमुळे स्वातंत्र्यलढ्यात लोकांमध्ये जागृती होऊ लागली.

सा.प्रबोधचंद्रिकेच्या वृत्तानुसार, २ ऑक्टोंबर १९२९ रोजी महात्मा गांधीच्या ६१ व्या वाढदिवसनिमित्त ठिकठिकाणी सभा भरविण्यात आल्या. जळगाव येथेही काँग्रेस कमिटीच्या विद्यमाने अण्णासाहेब दास्ताने यांच्या अध्यक्षतेखाली असरावली येथील हनुमान व्यायाम शाळेचे संचालक डॉ.पटवर्धन यांचे व्याख्यान झाले. डॉ.पटवर्धन हे स्वत: खादीभक्त आहेत परंतु त्यांनी हल्ली खादीप्रचार करणाऱ्या लोकांच्या विकृत प्रसाराबद्दल बरीच हजेरी घेतली. खादीचे तत्व खरोखरच उत्तम आहे. परंतु त्याला जे स्वरुप दिले जाते ते मोठे घातक आहे असे त्यांनी सांगितले.

जळगाव येथे गांधी जयंती थाटात पार पडली. मराठी शाळातील शिक्षक व मुले यांनी फार चांगल्या प्रकारे भाग घेऊन कार्यक्रमास मदत केली. स्कूल बोर्डाकडून परीपत्रक जेशी आली त्यापेक्षाही उत्साहाने शिक्षक लोकांनी भाग घेतला.

काँग्रेस मंत्रीमंडळाचा कारभार सुरु होण्याच्या अगोदर जसे सरकारी सभारंभ होत होते. त्याचीच आठवण अशा वेळी झाल्याशिवाय राहत नाही. फरक एवढाच की तेव्हा युनियन जॅक तर आता तिरंगी झेंडा. असे कळते की काही शिक्षक लोक व मुलेहि नाराज अशाकरिता दिसली की पूर्वी राज्यारोहण-राजाच्या वाढदिवस वगैरे प्रसंगी जसा खाऊ वाटला जात होता तसा हया प्रसंगी त्यांना मिळाला नाही. काँग्रेस स्कूल बोर्ड पुढील वर्षी ही सुधारणा अंमलात आणील काय ?[1] अशा पध्दतीचे वृत्त सा.प्रबोधचंद्रिकेत आलेले दिसून येते.

१९३१ मध्ये गांधी जयंती निमित्त १.२५ (सव्वा) कोटी वार सूत अर्पण करण्याचा संकल्प संयुक्त खानदेशने केलेला होता. हा कोटीसूत यज्ञाचा संकल्प पुर्ण करण्याच्या दृष्टीने तालुका निहाय जबाबदारी सोपविण्यात आली होती. साने गुरुजींनी तर अमळनेर तालुका २० लांख वार सूत देईल असे जाहीर केले.[2]

१.२५ (सव्वा) कोटी वार सूत संकल्पामुळे ठिकठिकाणी सूतशाळा व उद्योगमंदिर सुरु करण्याच्या कामाला गती मिळाली. पूर्व खानदेशातील मारवड, डांगरी व अमळनेर येथे सूतशाळा सुरु झाली. चरखे व टकळींचा प्रचार सुरु झाला. कार्यकर्त्यांचे दौरे सुरु झाले. २३ ऑक्टोंबरपर्यंत पूर्व खानदेशातून ६०४७९०० वार सूत गोळा झाले होते.[3]

गांधी जयंतीच्या निमित्ताने संयुक्त खानदेशात गांधी सप्ताह साजरा करण्यात आला. अमळनेर येथे या सप्ताहात प्रामुख्याने खादी विक्रीचे काम करण्यात येऊन ६०० रुपयांची खादी विक्री झाली. गांधी जयंतीच्या दिवशी महात्माजींच्या चित्राची पालखीतून मिरवणुक काढण्यात आली. त्या दिवशी मिल बंद ठेवण्यात आली होती. हायस्कूल व मराठी शाळाही बंद होत्या. त्या दिवशी साने गुरुजी, विद्यार्थी व काही मजुरांनी सकाळी मिल चाळीतील ५०-३० संडास साफ केले. काँग्रेस कचेरीसमोर जमलेल्या हायस्कूलच्या विद्यार्थ्यांसमोर साने गुरुजींचे भाषण झाले. त्याचदिवशी रात्री मिलमधील मजुरांच्या पथकाने मजुरांच्या घरी जाऊन २०० रुपयांची खादीची विक्री केली. मारवड या गावी गांधी सप्ताहात गाव झाडण्यास लहान मुलेही आली होती.[4] तळवेल वगैरे गावातील तरुणांनी गांधी सप्ताह साजरा करुन ७४०० वार सूत काँग्रेस कमिटीला दिले. तळवेलच्या गुल् भिल्ल याने दोन दिवस उपवास करुन भिल्ल लोकांनी दारु बंद केली.[5]

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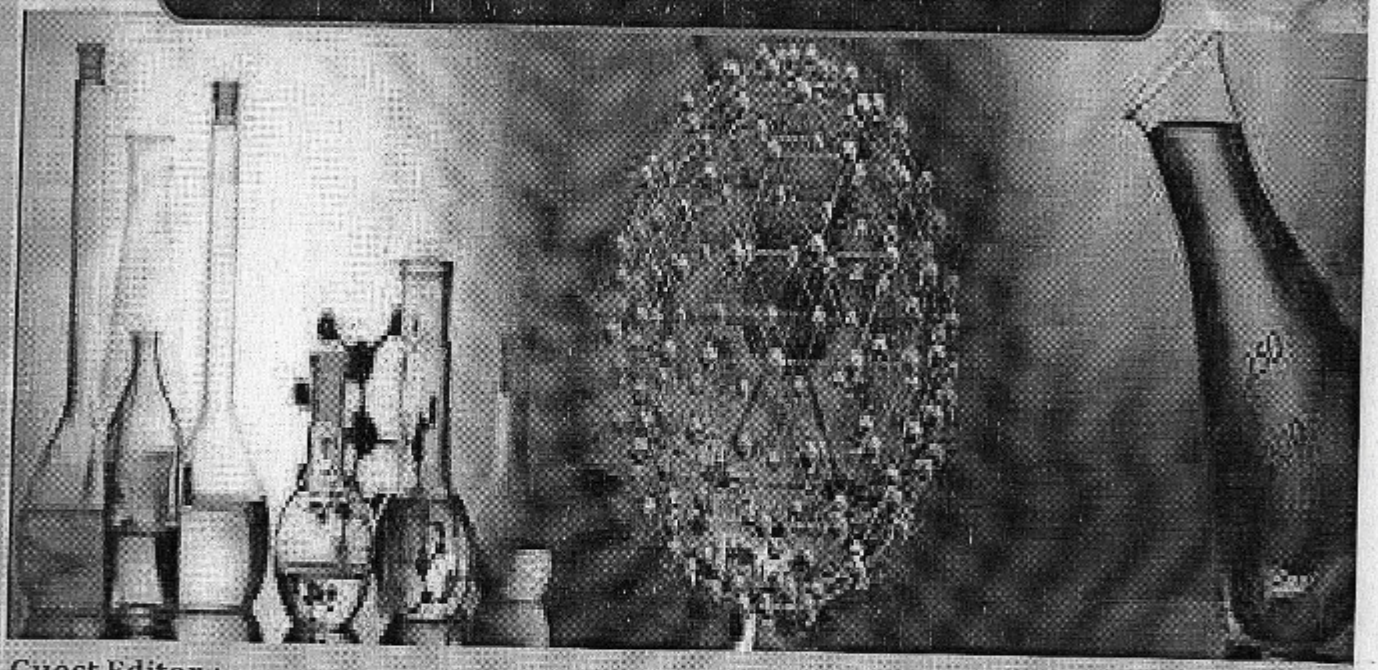

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E-Waste- Environmental Problem

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Abstract :

The electrical and electronic waste is one of the fastest growing waste in India. The increasing "market penetration" in developing countries produce e-waste as one of the fastest growing waste. The e-waste has become a matter of concern because of the presence of toxic and hazardous substances present in electronic goods and if not properly managed, it can have adverse affects on environment. Hence there is strong need to adopt sustainability practices to tackle the growing threat of e-waste. This article is based on secondary data which study the e-waste composition, and different hazardous materials found in the E-waste. During the disposal of e-waste the , partial recyclability can occur, and use of development of retrieval techniques for their recycling and re-use in order to and protect the environment.

Keywords: E-waste, E-waste management, hazardous substances, recycling etc.

Introduction

E-waste is defined as waste electrical and electronic equipment that is dependent on electric currents or electromagnetic fields in order to function, including all components, subassemblies and consumables which are part of the original equipment at the time of discarding. They include:

- Consumer/entertainment electronics (e.g. Televisions, DVD players and tuners).
- Devices of office, information and communications technology (e.g. Computers, Laptops, Telephones and Mobile phones).
- Household appliances (e.g. Fridges, Washing machines and Microwaves, Grinders).
- Lighting devices (e.g. Desk Lamps).
- Power tools (e.g. Power drills) with the exclusion of stationary industrial devices.
- Devices used for sport and leisure including toys (e.g. Fitness machines and Remote control cars).
- Networking devices (e.g. Routers, Hub, Gateways, Switch)

Growth of e-waste

Purakala

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Assessment of Effect of Triazophos Toxicity on the Protease Activity in Freshwater Bivalve, *Lamellidens marginalis*

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Abstract

The present study was undertaken to determine the changes in protease activity of freshwater bivalve, Lamellidens marginalis. The bivalves were exposed to LC_{50} values of 96 hrs with concentrations of 3.67ppm of triazophos upto 96 hrs for acute treatment. The protease activity was estimated after 24 hrs and 96 hrs. Exposure to the triazophos showed significant decrease in the protease activities with increased exposure period in the digestive gland of Lamellidens marginalis.

Keywords: protease, *Lamellidens marginalis*, acute exposure, triazophos, decrease.

Introduction:

Pollution of aquatic systems is due to wide use of various pesticides in agriculture to control pest turn out to be a serious toxicological and environmental crisis because of their toxicity. Pesticide run-off into the aquatic ecosystem represents a potential threat to aquatic organisms. They can enter the aquatic food chain due to their ability to accumulate in the biota. Pesticides on entry in body react with variety of binding sites and can cause hazards by alteration in physiological as well as biochemical changes. At the cellular level chemical stress may alter the enzyme activities in the organisms. Pollutants such as pesticides and heavy metals are often involved in oxidative stress which facilitates the production of

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यावल तालुक्यातील आदिवासी व शेतकऱ्यांचा इंग्रजांशी संघर्ष (१८२० ते १८५२)

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इंग्रजी सत्तेचा भारतात १७५७ उदय होऊन १८५७ पर्यंत बहुतांश भारत त्यांनी जिंकून घेतला. महाराष्ट्र व खानदेशही त्यांनी १८२० पर्यंत जिंकुन घेतला. परंतु खानदेशातील यावल तालुक्यातील स्वातंत्र्यप्रिय आदिवासी व शेतकऱ्यांनी मात्र इंग्रजांशी सत्ता मानण्यास तिव्र विरोध केला. त्यातुन इंग्रज व आदिवासी, शेतकऱ्यांमध्ये अनेकदा संघर्षही झालेले दिसून येतात. इंग्रजांकडे आधुनिक हत्यारे, प्रशिक्षित सैन्य व आर्थिकदृष्ट्या बलिष्ठ असल्याने इंग्रजांपुढे यांचा निभाव लागला नाही. असे जरी असले तरी यावल तालुक्यातील स्वातंत्र्यप्रिय आदिवासी व शेतकऱ्यांनी केलेला विरोध महत्वाचा आहे.

आसिरगडचा पाडाव झाल्यानंतर ९ एप्रिल १८१९ पासून इंग्रजांनी मराठ्यांविरुध्द काढलेली मोहीम संपुष्टात आली. सेंधवा, सोनगीर, लळिंग आणि इतर ठिकाणी दळणवळणाच्या मार्गावरील लष्करी ठाणी बगळता खानदेशातील सर्व किल्ले इंग्रजांच्या ताब्यात आले. इंग्रजांनी त्यांच्या सैन्याचे प्रमुख लष्करी ठिकाण मालेगाव येथे ठेवले आणि कॅप्टन ब्रिग्ज या इंग्रजांच्या प्रतिनिधीने धुळ्यासारख्या मध्यवर्ती ठिकाणी त्याचे निवासस्थान ठेवले. त्यांच्याकडें आलेल्या इंग्रजांच्या कर्जाच्या परतफेडीसाठी पाचोरा, यावल, चोपडा आणि लोहारा परगण्यातील बारा खेडी ही शिंदेनी इंग्रजांकडे सोपविली. रावधर निबांळकरांचा मुलगा सूर्याजीराव निंबाळकर याने इंग्रजांची फौज ठेवली. सूर्याजी निबांळकरांच्या ताब्यातील यावलचा प्रदेश इंग्रजांकडे देण्यात आला.[१](१८२१)

यावलचे वतन १७८८ मध्ये राव धार निंबाळकरांना ग्वाल्हेरच्या शिंद्यांकडून मिळाले. त्यानंतर १८२१ मध्ये सूर्याजीराव निंबाळकराकडून यावलचा किल्ला इंग्रजांनी हस्तगत केला. त्यावेळी निंबाळकरांनी केलेल्या विरोधास देशमुखांनी पाठिंबा दिला होता.[२] या प्रदेशाचे १८२१ मध्ये हस्तांतर झाल्यावर सूर्याजीराव निंबाळकरच्या हाताखालील यावलची ३००० सेना आणि चोपडयाजवळील लासूरचा स्थानिक सरदार ठोके याची सेना इंग्रजांनी निष्प्रभ केली.[३]

यावलच्या लालजी सखाराम याचा ब्रिटिशांना विरोध :

मध्ये यावल, चोपडा, पाचोरा आणि लोहारा हा प्रदेश शिंद्याच्या ताब्यात होता. एका तहाने हा प्रदेश शिंद्यांनी ब्रिटिशांना दिला. परंतु ही गोष्ट त्या प्रदेशातील वतनदारांनाआणि अधिकाऱ्यांना तसेच सैनिकांना आवडली नाही. ते पूर्वीच्याच आपल्या स्वामीशी एकनिष्ठ होते. याकाळात यावलचा किल्ला लालजी सखाराम ऊर्फ लालाभाऊ याच्या ताब्यात होता. तो यावलचा मामलेदार आणि यावल येथे अरालेल्या किल्याचा किल्लेदार होता. लालजी सखाराम याने जेव्हा ब्रिटिश जिल्हाधिकारी बेल हा किल्ला

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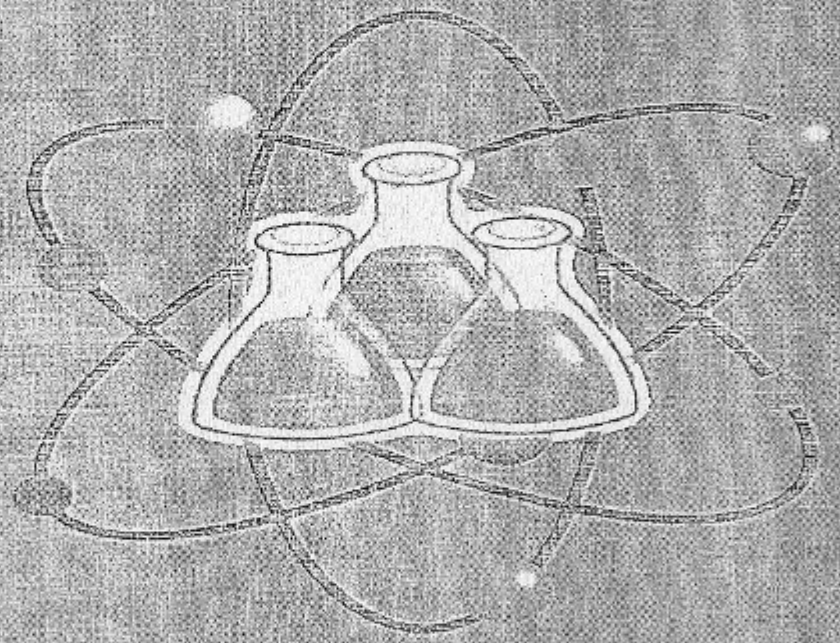

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Study of Growth and Characterization of Cobalt Tartrate Crystals in Silica Gel Medium

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Abstract

In the present investigation, single-crystals of cobalt tartrate were grown by using silica gel as a growth medium. These single crystals were grown by simple gel technique using diffusion method. The optimum growth conditions for these crystals were optimized by varying various parameters viz., pH of the gel solution, gel concentration, gel setting time, concentration of the reactance, growth period and temperature. The grown crystals are characterized by XRD and FTIR. The crystalline nature of grown crystal was confirmed by using powder X-ray diffraction technique which shows that cobalt tartrate hydrate has crystallized in orthorhombic structure. The circular shaped, opaque and brown colored crystals were observed. The particle size is determined as 16.16.nm. The functional groups present in the crystals were identified by using Fourier Transform Infrared spectroscopy (FTIR) analysis which shows that the presence of O-H bond, C-H bond and metal–oxygen bond.

Key words: Gel technique, Cobalt Tartrate, XRD, FTIR

Introduction

A systematic study of crystallization in gels begins with Lissegang's famous discovery of periodic crystallization in gels. Crystal growth is a heterogeneous chemical process in which conversion from one phase to another phase of compound is involved. This method has gained considerable attention because of its simplicity and effectiveness in growing single crystal of certain compound. This technique is an alternative technique to solution growth with controlled diffusion. This growth process is free from convection. [1-4].

Crystal habit of various crystals, grown under different conditions and also by different methods such as, melt growth, vapour phase growth, solution growth and gel growth were described by H.E. Buckley [5], P. Hartman [6], K. Kern [7], A. A. Chernov [8],